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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,827	02/09/2004	Rolf Weis	02P15178US/INTECH 3.0-079	9772
530	7590	09/19/2005	EXAMINER	
LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK 600 SOUTH AVENUE WEST WESTFIELD, NJ 07090			TRINH, MICHAEL MANH	
			ART UNIT	PAPER NUMBER
			2822	

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/774,827

**Applicant(s)**

WEIS ET AL.

**Examiner**

Michael Trinh

**Art Unit**

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-44 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

Art Unit: 2822

**Part III DETAILED ACTION**

**\*\*** This office action is in response to filing of the application on February 29, 2004.

***Election/Restriction***

1. Restriction to one of the following inventions is required under 35 U.S.C. § 121:

I. Claims 7-12,17-20,33-42,44, drawn to a semiconductor device, classified in Class 257, subclass 304.

II. Claims 1-6,13-16,21-32, and 43, drawn to a method of forming a semiconductor device, class 438, subclass 243.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (M.P.E.P. § 806.05(f)). Unpatentability of the group I invention would not necessarily imply unpatentability of the group II invention, since the device product of the group invention could be made by process material different than those/that of the method of the group invention. For example: instead of patterning and etching, mechanically sawing to form trenches in the semiconductor substrate; and instead of diffusing the dopants through trench sidewall, implanting of the dopants.

**\*\*** If Group I of product is elected, Applicant is further required to elect either

- Subgroup Ia, product claims 7-12, drawn to a memory cell;
- Subgroup Ib, product claims 17-20, drawn to a buried strap;
- Subgroup Ic, product claims 33-42, drawn to a contact structure; or
- Subgroup Id, product claim 44, drawn to a memory cell array device.

**\*\*** If Group II of method is elected, Applicant is further required to elect either

- Subgroup IIa, method claims 1-6, drawn to a method for forming memory cell;
- Subgroup IIb, method claims 13-16, drawn to a buried strap;
- Subgroup IIc, method claims 21-32, drawn to a contact structure; or
- Subgroup IId, method claim 43, drawn to a memory cell array device.

Currently, there is no generic claim. The Subgroups inventions are distinct, species, combination and subcombination, each from the other, because the subgroups are drawn to different species and subcombinations with different structures such as a memory cell, a buried

Art Unit: 2822

strap, a contact structure, and memory cell array device, wherein Subgroup Ia-IIa is differently drawn to a memory cell and method thereof; Subgroup Ib-IIb is differently drawn to a buried strap and method thereof; Subgroup Ic-IIc is differently drawn to a contact structure and method thereof; and Subgroup Id-IId is differently drawn to a memory cell array device and method thereof.

Applicant is required to elect one Subgroup for consideration and examination.

Because these inventions are distinct for the reasons given above and have acquired a separate status as shown by the above different classifications and as given in the above examples, the fields of search are not co-extensive and separate examination would be required, restriction for examination purposes as indicated is proper.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael M. Trinh whose telephone number is (571) 272-1847. The examiner can normally be reached on M-F: 8:30 Am to 5:00 Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on (571) 272-1852. The fax phone numbers for the organization where this application proceeding is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

-Oasc-



Michael Trinh  
Primary Examiner